AEE Astbury Environmental Engineering, Inc.
A MEMBER OF THE ASTBURY GROUP

5933 WEST 71ST STREET ▪ INDIANAPOLIS, INDIANA 46278 ▪ 317-290-1471 ▪ FAX: 317-290-1670

October 18, 2000

Director, Water Division
Region 5, United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604
Attn: Mr. James Coleman (WC-15J)

RE: Environmental Services
Findings of Violations of Order for
Compliance, Docket #V-W-00-AO-14
Wastewater Issues
Franklin Power Products
400 Forsythe Street
Franklin, Indiana 46131
AEE 237.00

Dear Mr. Coleman:

Please find attached the documents you requested be provided within thirty (30) days of receipt of the above-referenced letter.

The required documents include the following:

- A detailed written explanation of why violations of effluent limits for Zinc, Lead, Copper, Chromium and Oil & Grease occurred at Franklin Power Products (FPP).

- A detailed description of the corrective actions taken by FPP to address the problem, as discussed above.

Sincerely,
ASTBURY ENVIRONMENTAL ENGINEERING, INC.

Willis Mack Overton, CHMM
Vice President, Industrial Services

cc: Mr. Rob Baker, FPP
Mr. Mark Stanifer, IDEM
Mr. Rick Littleton, Franklin Municipal Sewage Treatment Plant
Enclosures

Delco Remy

FRANKLIN POWER PRODUCTS

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RE: Findings of Violations of Order for Compliance, Docket #V-W-00-AO-14
Wastewater Issues
Franklin Power Products
400 Forsythe Street
Franklin, Indiana 46131

Dear Mr. Coleman:

I hereby certify that the contents of this submittal are true and accurate to the best of my knowledge.

I look forward to working with you to resolve this situation. Should you have any questions or comments regarding this matter, please feel free to contact this office at your convenience.

Sincerely,
FRANKLIN POWER PRODUCTS

Rob Baker
Environmental Manager

cc: Mr. Mack Overton, AEE.
Mr. Mark Stanifer, IDEM
Mr. Rick Littleton, Franklin Municipal Sewage Treatment Plant

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Franklin, Indiana 46131

Dear Mr. Coleman:

Please find below the response prepared for parts 2e) and 2f) of the above referenced order. Part 2e. is as follows: **Within 30 days of receiving this Order, a written detailed explanation of the reasons why FPP violated its effluent limits (Zn, Pb, Cu, Cr, and O & G) at outfall 001 as detailed in Attachments A.**

In short, the exceedances are all the result of an inability to control the oils and lubricants removed from parts received by the facility from being discharged through the sewer. The following is a detailed discussion of the pollutants and their relationship to these products.

As you have noted from our previous submittals, accepts automotive parts for remanufacture. Often the pre-used parts contain engine oil and other lubricants, which are removed from the parts at the beginning of the remanufacture process. As the schematic flow diagram and the site plan submitted previously indicates, these materials are discharged from the facility. It is important to note that the oils and lubricants removed from the automotive parts accepted by the facility are not homogenous. Further, consider the environment to which the oils and lubricants were exposed. Employed in automotive vehicles, the oils and lubricants become contaminated with low levels of the metals, which comprise the automotive parts. Thus we assert that the oils discharged by the facility contain metals. In order to support this assertion, the analysis of both total and dissolved metals was performed on wastewater during the most recent sampling event completed at the facility. Specifically, these samples were collected September 7, 2000. The results of this series of analyses are presented on the following page.

Table 1

Metal	Total Concentration, Effluent	Dissolved Concentration, Effluent	Effluent Limits Mon. Avg./ Daily Max.
Chromium, Total	1.140 mg/L	<0.020 mg/L	1.47mg/L / 2.24mg/L
Copper	1.350 mg/L	<0.020 mg/L	1.78mg/L / 0.28mg/L
Lead	1.610 mg/L	<0.040 mg/L	0.37mg/L / 0.59mg/L
Nickel	0.388 mg/L	<0.020 mg/L	2.05mg/L / 0.67mg/L
Zinc	6.980 mg/L	0.024 mg/L	1.27mg/L / 2.24mg/L

This data indicates that the metals in the effluent are not dissolved. If the metals are not in the dissolved phase of the sample, then they are contained in the suspended phase. The suspended phase of the samples collected from FPP is exclusively the organic phase, comprised of the oils and lubricants discussed above. Thus, the impact of this data, then is to indicate that a strict relationship exists between the discharge of metals and the discharge of oil and grease. As oil and grease is discharged, so are metals. This accounts for all of the oil and grease violations and all but six of the metals violations. Of the six metals violations, four come from the May 31, 2000 event. Given that a significant blockage of oily sludge was discovered in the sewer line between the separator and the sampling point, it is probable is the genesis of these remaining violations.

Part 2f) reads as follows: **Within 30 calendar days of receiving this Order, a detailed description of corrective actions or steps FPP has taken or intends to take to achieve compliance with the effluent limits set forth in its IU Permit and in Franklin's Ordinance 98-7. The report must summarize the additional equipment and other measures necessary to achieve consistent compliance, and the cost of such measures, both capital cost and annual operation and maintenance cost. The report must also contain a schedule showing when FPP will implement these compliance measures.**

A history of the facility's attempts and efforts at achieving compliance follows. When the facility first became subject to discharge limitations, the only control on the discharge of oil & grease was the presence of a belt skimmer in the collection pit identified on the site plan. After the first few months of operation under the facility's discharge permit, it became apparent that the facility's discharge would not be able to meet the permit requirements without the addition of more treatment equipment. After conducting an appropriate investigation into the potentially acceptable treatment options, the facility purchased a Great Lakes Environmental oil / water separator with a capacity of 75 gallons per minute. This unit was installed June 1999. Soon after the installation of the oil / water separator was installed, it became clear that the unit

was not being operated optimally. The facility attempted to work with the equipment supplier, however, that effort was ineffective. The suggestion was made that operational difficulties with the unit may be related to a lack of, or ineffective maintenance. In order to resolve these issues, Standard Operating Procedures (SOPs) were developed for the operation, cleaning and maintenance of the unit. Specifically, these SOPs addressed the flow of wastewater into the unit, weir height, sludge removal, cleaning of the coalescing plates and other appropriate maintenance activities. When these activities were not sufficient to reduce oil and grease concentrations, concerns arose that sludge was present in the sewer line between the separator and the sampling point. This concern increased as clean water was observed in the separator effluent, yet the water was not clean at the sampling point. Cleaning of these lines was completed September 3, 2000. However, shortly after this cleaning, the same situation was observed, wherein clean water (that is, without a sheen) was observed in the separator effluent yet, a sheen was still present at the manhole sampling point.

As metals violations began to increase, the decision was made to collect samples for total and dissolved metals, as presented above. Having received the data from this analysis and the Compliance Order at about the same time, our efforts to resolve the problem were made much more rapid. A plan was quickly developed to enhance the existing oil/water separator. Up to this point, we had tried to make the oil/separator work. With the issuance of the Compliance Order, this option was no longer available. Concurrent with the system development, another cleaning of the lines was performed, and the videotaping of the sewers to insure that all process discharges were, in fact, going to the oil/water separator. It was during this cleaning event that a substantial blockage of the lines was discovered, comprised of an oily sludge.

What was known at this time was that the wastewater was being contaminated with oil and grease; further, the oil and grease contained metals. Therefore, if the oil and grease could be removed, the metals would also be removed. We then developed an approach that focused on increasing retention time and also adding filtration to the system. With this information in mind, several opetions were considered, including chemical addition and precipitation, microfiltration and various configurations of settling and filtration approaches. After considering equipment costs, equipment availability, control efficacy and the appropriateness of each option, a system was developed to further treat the wastewater after the oil/water separator. The system receives the oil/water separator effluent into two 300-gallon tanks located in series (Tanks 1 and 2). The oil/water separator effluent is discharged at approximately 25 gallons per minute (gpm), giving an approximate addition of 10 minutes retention time in each tank. The organic phase and aqueous phase of the wastewater separates very effectively, so it is our opinion that this additional separation will effectively allow for the discharge of water free from oil and grease contamination.

However, should some oil pass through both tanks with the wastewater, additional protections have been taken. Wastewater passing through the two tanks will then collect in a 200-gallon tank equipped with a submersible pump (Tank 3). When the pump is activated by a float mechanism, the wastewater will pass through a paper oil filter, then through a pressurized sand filter before discharge. The paper filter has a capacity of 5 gallons of oil. Each sand filter is a 40-gallon capacity unit. Two filters in parallel are included in the system, to allow for back flushing. The effluent from the sand filter will enter into another 200-gallon tank equipped with a pump for the purposes of completing a manual back flush (Tank 4). During normal operations, this tank will then discharge to the sewer by gravity. When back flushing is required, a valve will be closed on this tank to allow water to build up, then be back flushed through the filter. The back wash water will be piped back to the pit before the oil/water separator.

An additional feature of this system design is that sampling points have been placed both after the paper oil filter and after the sand filter. The paper oil filter and both sand filters are equipped with pressure gauges to determine when replacement or back washing are necessary. This system will be operational on October 20, 2000. It is important to remember that this is a temporary installation at this time. Because time was not available to due a full fledge treatibility study or design a system in the traditional sense, we are not certain that this system will operate in the most efficient manner possible. However, we are confident that this system will prevent the kinds of violations, which have been observed at the facility over the past thirty months. For this reason, the sand filters have been rented for a one month period. If any equipment changes are necessary, the will be observable within this timeframe.

Should the system work without significant problems through the first month, the equipment will be purchased. Additionally, the following will be added to the system to make it more automated. An alarm will be installed to warn plant personnel that the pump is inoperable in Tank 3, should that situation arise, due to a backup or clog. A safety will be placed on the submersible pump in Tank 3 to insure that it does not continuing flowing if a clog or backup exists in one of the filters. In the event of such a backup or clog as the system is currently configured Tank 3 will discharge directly to the sewer. In a permanent, automated system, another holding tank or some other option will be employed to contain this overflow, so that it does not flow directly to the sewer. Finally, a locking device will be placed upon the valve from the pit to the oil/water separator to insure that a consistent flow rate into the separator is possible.

One question, which has not been answered throughout our attempts to address these issues is, "Why does the oil/water separator fail to adequately treat the problem?". No satisfactory response has yet been developed. Given the timeframe established by the Environmental Protection Agency (EPA) Region 5 and the lack of answers offered by the

equipment supplier, the decision was made not to concern ourselves with why it was not adequate to remove the oils from the facility, and simply add equipment to solve the problem.

It is our opinion that the installed system described above will be adequate to control the oil and grease and metals discharges from the facility in such a way that violations will no longer occur. As such, the facility has achieved and can now maintain compliance with the terms, conditions, and requirements of its Industrial Waste Discharge Permit No. INP000172 and with the Franklin POTW Sewer Use Ordinance No. 98-7, as the facility is required to do by Part 1 of the previously referenced Compliance Order. Please find attached to this document a summary of the additional equipment and the associated costs of achieving compliance, along with a compliance schedule. Astbury Environmental Engineering, Inc. (AEE) and FPP will monitor this situation very closely over the next month to insure that the system will operate as necessary and as designed.

Should you have any questions or comments regarding these issues, please feel free to contact this office at your convenience.

Sincerely,
ASTBURY ENVIRONMENTAL ENGINEERING, INC.

Willis Mack Overton, CHMM
Vice President, Industrial Services

WMO:wmo
Enclosures
Cc: Mr. Mark Stanifer, IDEM
Mr. Rick Littleton, Franklin Municipal Sewage Treatment Plant
Mr. Rob Baker, FPP
Mr. Mike Gillespie, AWT

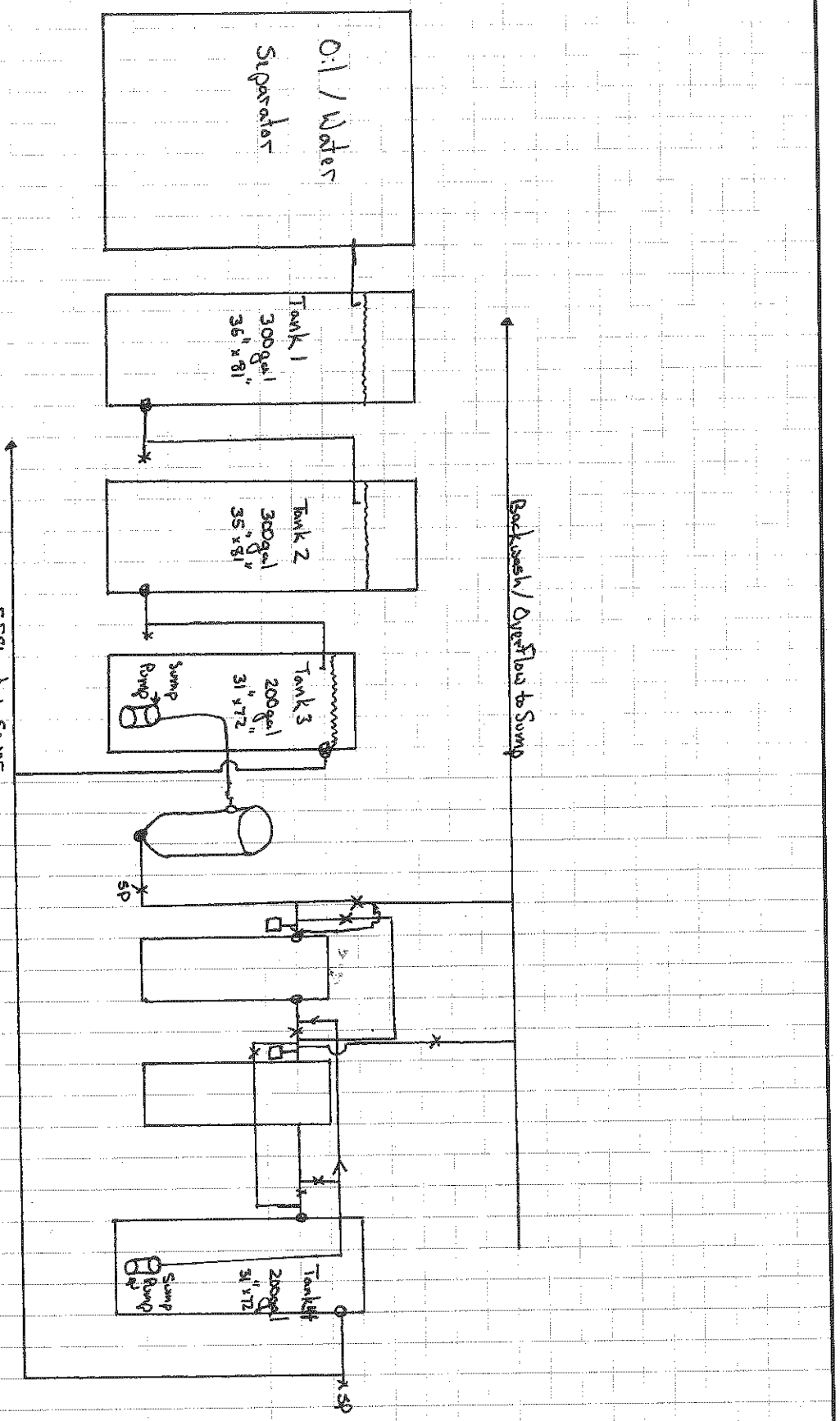
Compliance Schedule

The facility will complete installation of the above described system by **October 20, 2000**. A one month period will be established to monitor the operation of the system in order to determine what, if any alterations are required to insure that the system is operating optimally. This period will conclude by **November 20, 2000.** An additional one month period may be required to make the necessary alterations to the system and insure to optimal operation can occur on an automatic basis. Final compliance then, will be achieved by **December 20, 2000**.

Cost Summary

Please find below a summary of the expenses associated with the system upgrade and efforts to comply with the requirements of this order.

Item	Capital Cost	Annual Operating Maintenance Costs
Oil/Water Separator	$10,000.00	$1,000.00 per year
Sewer Cleanout	$2,300.00	None
Sewer Cleanout and Videotaping	$15,500.00	None
Tanks (1-4)	$2,200.00	None
Oil Filter	$500.00	$100.00
Sand Filters – Rental	$2,000.00	None
Sand Filters – Purchase	$6,000.00	$500.00
Related Equipment	$1,500.00	None



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A MEMBER OF THE ASTBURY GROUP

Franklin Power Products
Franklin, Indiana
Schematic Flow Diagram

PROJECT NO. AEE 237.00-202	SCALE Not To Scale
PROJECT MANAGER N. Duerton	DATE 10/19/00
FILE NO. N/A	FIGURE NO. 1